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St. Bartholomew's Hospital Journal,

OCTOBER 14th, 1897.

"Æquam memento rebus in arduis
Servare mentem."—*Horace,* Book ii, Ode iii.

Some Chapters on Pneumothorax.

By SAMUEL WEST, M.D., F.R.C.P.

II. ONSET, SYMPTOMS, AND PHYSICAL SIGNS.

(*Continued from Vol. IV, p.* 183.)

AS already stated, percussion yields the same tympanitic note over the whole affected side, the only possible exceptions being over those parts where the lung may happen to be adherent or collapsed, or where fluid is present in the pleura.

If the lung be adherent at the apex the percussion note may be impaired, but it becomes rather "boxy" than absolutely dull, for the resonance from the pleural cavity below is transmitted through the solid lung or along the chest walls, and there may be even considerable adhesion or consolidation at the apex without any impairment of the note at all. In the interscapular space behind also the note, theoretically, might be impaired if the lung were collapsed, round its root, as it commonly is; but in this case also any dulness that might be produced is usually masked by the surrounding hyper-resonance.

Even when fluid is present in the pleura it may be in considerable amount, and yet yield no dulness. The reason of this in most cases is that when the patient is in the semi-recumbent position, or sitting up for the purpose of examination, the diaphragm takes the shape of a saucer, so that a good deal of fluid may lie in it, deep and out of reach, and thus not affect the percussion note. Hence it is that succussion may often be obtained easily when percussion gives no evidence of fluid.

When the amount of fluid is large enough to give dulness, the level is found to change readily with position, and with very much greater rapidity than is the case in simple pleural effusion.

The percussion note is said to change its pitch according as the mouth is open or shut. I have often tried, but have not succeeded in satisfying myself that this statement is correct.

It is also stated that when the intra-pleural tension is high, the percussion-note may lose its tympanitic character, and become impaired, or even dull. I have never seen anything at the bedside to justify this statement, and the experimental observations that I have made go far to disprove it, and have led me to reject it.

Auscultation.—The voice- and breath-sounds are usually absent, just as they are in an effusion of fluid, except, it may be, in places where the lung is still in contact with the chest wall. Thus, the breathing may be bronchial or amphoric in the interscapular space behind where the lung lies collapsed near the spine. At the apex also, when the lung is adherent, the breath-sounds may be exaggerated. This, however, is not nearly as frequent as might be anticipated, the explanation being, I suppose, that the lung here is so completely collapsed that even the air-tubes

contain but little air, so that the breath- and voice-sounds are not transmitted.

Although, as stated, it is the rule for the voice- and breath-sounds to be absent over a pneumothorax, still there are cases in which they are greatly exaggerated, the voice-sounds being distinctly heard, and the breathing being bronchial or amphoric in character.

Of this, two explanations are usually offered.

(1) The first assumes that in such cases there is a wide opening into the lungs, allowing the air to pass freely in and out of the pleura, so that the voice- and breath-sounds are transmitted directly to the air in the pleura. Pneumothorax then offers practically the same conditions as a large pulmonary cavity, and may yield similar auscultatory sounds.

This explanation, however, can at best only be partly true, for even when the pulmonary opening is free, amphoric breathing is not always heard, indeed no breath-sounds at all may be audible; while, on the other hand, amphoric breathing may be present when it was obvious during life that the opening was closed, and the fact be proved by post-mortem examination.

Thus, I remember a man with pneumothorax in whom amphoric breathing was at first absent, but developed subsequently, and that at a time when it was evident from the contraction of the side and the return of the organs to their normal places that the air was being rapidly absorbed from the pleura, and that therefore no free opening could exist through the lung. As the air continued to be absorbed the amphoric breathing ultimately became fainter and fainter, and finally disappeared, its place being taken by the normal respiratory murmur.

(2) The other explanation is that the amphoric breathing is the effect of consonance, the sounds—produced in the collapsed lung, and which are often heard behind even when there are no respiratory sounds to be heard elsewhere—being taken up and reinforced by the air contained in the pleura.

This explanation also seems unsatisfactory, for if it is adequate to explain the less common cases in which amphoric breathing occurs, it does not explain why it is more frequently absent. Consonance certainly cannot explain the bronchial or amphoric breathing which we get in some instances of fluid effusion, and I think it must be admitted that there is at present no really satisfactory explanation of the phenomenon which will fit all cases.

The heart-sounds are sometimes heard loudly over a wide area in pneumothorax, and may have a somewhat amphoric character. This is also explained as the result of consonance, but it is far more often absent than present.

Whatever the explanation given, it must be recognised clinically that in respect of physical signs, there are two groups of pneumothorax, the first (the common form) that in which both the voice- and the breath-sounds are absent, the physical signs being like those of pleuritic effusion, except that the side is resonant instead of dull; the second (the rarer form) that in which both voice- and breath-sounds are audible and usually exaggerated, so that they have a bronchial, or it may be an amphoric character.

Two phenomena which auscultation yield are very characteristic, viz. the *bell-sound* and *succussion*, to which may be added perhaps a third, viz. the *metallic tinkle* or *echo*. Though very suggestive of pneumothorax, they are not absolutely pathognomonic, for they may be heard in a large pulmonary cavity, and the two former also in a distended stomach.

The bell-sound.—If a coin be placed flat upon the walls of the thorax in front and tapped with another, while the chest is auscultated in the axilla or behind, under ordinary circumstances nothing is heard except a dull, metallic tap, like that produced by striking the two coins together upon the hand; but in pneumothorax the sound acquires a clear, ringing character, much like that obtained on striking a metal bell or porcelain bowl. This is called the "bell-sound." Though known to Laennec, it was especially studied and described by Trousseau under the name of "bruit d'airain" (brass).

The bell-sound, though very suggestive of pneumothorax, is not quite pathognomonic, for it may be heard over a dilated stomach, and occasionally over a large cavity in the lung.

The conditions upon which the phenomenon depend are not clear; but the cavity must be of considerable dimensions, and I think it must have smooth walls. The tension of the air within the cavity cannot have much to do with it, for it may be heard in pneumothorax, where the intra-pleural tension is high, *e.g.* several inches of water, as well as in cases where the tension is not above that of the atmosphere. It has been heard in the corpse when it was absent during life, and it was this fact that led Traube to suggest the view that it was the result of diminished tension. That the matter is not as simple as it may at first sight seem is clear from the fact that, though generally present in pneumothorax, it is sometimes absent, and that it is not heard everywhere over the side, but only in certain places. Trousseau maintained that, in order to elicit it, the part auscultated should be directly opposite to that on which the coins were placed. This, however, is not the case, and it is not possible before trying to say in what position the bell-sound will be best obtained. In places where the lung is adherent to the chest walls, the bell-sound will not be heard, but it may be absent in parts where there are no adhesions to explain it. On the other hand, especially in partial pneumothorax, or where the lung has in great part expanded after an ordinary pneumothorax, it is possible sometimes, by means of the bell-sound, to mark out fairly definitely the limits of the air-containing cavity.

Succussion.—This phenomenon, familiar to Hippocrates, is the splashing sound produced by suddenly shaking fluid contained in an air-containing cavity. There are three conditions essential to its production, viz. (1) that the cavity should be of fairly large size; (2) that it should contain both air and fluid; and (3) that the fluid should be splashable, *i.e.* should not be so viscid that it could not be made to splash by any shaking to which the patient could be fairly subjected.

Succussion can be produced in the stomach of anyone after drinking largely and hastily of fluid, and in some cases of dilated stomach it may not be easy at first to decide whether the succussion has been produced in the stomach or in the left pleural cavity.

In the same way it is possible for succussion to be produced in a large pulmonary cavity, and I have more than once seen such cavities diagnosed on this account as pneumothorax.

However, succussion in a pulmonary cavity is rare, and chiefly for this reason, if for no other, that the fluid contained in such cavities is too viscid and tenacious to splash easily.

A cavity which contains air only cannot produce succussion, and therefore it will not be obtained in a case of simple pneumothorax. When succussion, therefore, is obtained, it is a proof that the cavity contains both air and fluid, and that in the case of the pleura we have not a simple pneumothorax to deal with, but a hydro- or pyo-pneumothorax, as the case may be. Hence it follows that succussion is not obtained in the early stages of pneumothorax, but only at a later period, when effusion has formed; nor is it necessarily obtained even then, if the fluid be in small amount or be very viscid or thick. Consequently, succussion is easily elicited in hydro-pneumothorax, or where the effusion is sero-purulent; but in pyo-pneumothorax it may be absent, and that even when the amount of fluid is considerable.

Thus, putting aside the rare cases in which a large cavity in the lung or a dilated stomach might cause some difficulty in diagnosis, succussion is practically pathognomonic of pneumothorax with effusion; but the converse is not true—that the absence of succussion shows the absence of fluid.

In most cases the succussion splash has a ringing, metallic character, due, no doubt, in this instance to consonance. It is sometimes so loud as to be easily heard at a distance, just as succussion in the stomach often is. Patients frequently hear it themselves, and describe it accurately, and sometimes even complain of it.

Metallic tinkling.—Closely allied to succussion and the bell-sound, and like them, no doubt, a phenomenon produced by consonance, is the metallic tinkle, a peculiar, musical, ringing sound, like that produced by the falling of a drop of water in a grotto ("gutta cadens"). This is, indeed, the explanation usually given of its production, viz. that a drop falls from the walls of a large cavity into the fluid contained in it, and makes a splashing sound, which, reverberating from the walls of the cavity, obtains its metallic, ringing character. Similar sounds produced, not in the pleura, but in parts near the pleura, may also in like manner acquire similar characters, *e.g.* the gurgle of fluid swallowed as it passes down the œsophagus, or crepitation produced in a cavity in the lung.

Bruit de fistule.—Under this name Riegel describes a sound not often heard in pneumothorax, viz. a bubbling noise, audible on inspiration only, such as would be produced by the bubbles of air passing slowly through fluid and breaking on its surface—the explanation which Riegel has given of the phenomenon. The condition under which such sounds could be produced is that in which the opening into the lung is still patent, and the mouth of the fistula below the level of the fluid, so that on inspiration bubbles of air are sucked into the pleura. It is obvious that for this sound to continue the fluid must be pressed out of the pleura on expiration, being displaced by the air which has entered on inspiration. If the communication with the bronchus were so free as is obviously necessary, a kind of fluid valve would form, which would be sufficient to prevent the entrance of air, and consequently the occurrence of this phenomenon. In fact, the "bruit de fistule" is an accidental and altogether rare phenomenon, and is really more likely to be met with in an empyema discharging through the lung than in pneumothorax.

Pathological Jottings.

By A. A. Kanthack, M.A., M.D., F.R.C.P.

VI. The Process of Acute Inflammation.

If we observe the process of acute inflammation in the frog's mesentery, we find that there is first dilatation of the small arteries (*inflammatory congestion*). Thus more blood flows into the part, and the veins as yet not participating in the dilatation, the velocity of the blood-flow is increased. Gradually, but more slowly, the veins and capillaries also dilate, so that arteries, capillaries, and veins now become turgid, and the increased velocity gives way to retardation of the blood-flow. During this retardation the leucocytes arrange themselves along the inner wall of the veins, in the marginal zone, preparatory to their emigration. In the capillaries analogous changes are observed; in some the blood still travels onwards, in others there is barely a flow of plasma-like fluid, while in many the current has ceased altogether: there is stasis, the capillary being filled with red corpuscles, or sometimes with plugs of white corpuscles (white stasis). Emigration of leucocytes follows on the marginal distribution in the veins. This emigration is an active

process on the part of the white corpuscles; they may be watched sending out pseudopodia through the vessel wall, and gradually following the extruded part. The emigration or diapedesis of the leucocytes is generally accompanied by a diapedesis of the red corpuscles, at times but slight, at other times very marked, but always present. At this stage then we find amongst and between the capillaries numbers of white and red corpuscles, scattered about or collected together. At the same time that all those changes occur there is also a transudation of fluid, of plasma, sometimes so considerable in amount that the part becomes œdematous (*inflammatory œdema*).

Exactly similar phenomena are seen if we examine the inflammatory process in the mesentery of warm-blooded animals, or if we study the irritated cornea; the vessels at the corneal margin become dilated, and there is copious diapedesis and transudation of fluid. We have, therefore, the following conditions:

1. Dilatation of the arterial vessels (inflammatory congestion and increased velocity).
2. Dilatation of the capillaries and veins (retardation).
3. Retardation, and marginal arrangement of the leucocytes.
4. In the capillaries there may be complete stasis.
5. Diapedesis of white and red corpuscles.
6. Transudation of fluid (inflammatory œdema).

Although the process of emigration must be regarded as an active one on the part of the white corpuscles, there are a few factors which assist, and which must not be lost sight of. (1) Changes in blood-current: the quickened stream by centrifugal action forces the corpuscles which normally travel peripherally against the vessel wall, where they are inclined to adhere during the retardation on account of their natural tactile stickiness. When there is stasis the marginal distribution of the leucocytes is entirely absent. (2) Increased capillary and venous pressure to some extent must assist diapedesis, especially when (3) the permeability of the delicate vessel wall is at the same time increased. That the vessel wall becomes more porous can hardly be questioned, as we shall see when we come to discuss the process of transudation. (4) Lastly, the vessel wall must be in a suitable condition to allow the leucocytes to adhere. Certain chemical substances, without affecting the leucocytes, will prevent diapedesis, presumably by producing some alteration of the vessel wall. Before emigration can occur it appears, therefore, certain conditions must exist: (*a*) changes in the blood-current to allow of a marginal distribution of the leucocytes; (*b*) a suitable state of the vessel wall, without which adhesion cannot take place; (*c*) amœboid activity of the white corpuscles. It is by means of their own movements that the leucocytes pass out, and in this sense emigration is an active process, and anyone who has directly observed the diapedesis of leucocytes is firmly convinced of their vitality and activity. Substances which paralyse the amœboid movements of the white corpuscles completely stop diapedesis.

If we observe amœboid leucocytes outside the animal body, we find that whenever they come in contact with the surface of a foreign body they attach themselves and become flattened out; and if the foreign body be porous, we find that having attached themselves they send out pseudopodia into the pores. It is important to remember that this tactile sensibility of the amœboid leucocyte is a natural property. When once the corpuscle has been allowed to come in quiet and undisturbed contact with the vessel wall it will flatten out and attach itself, send a pseudopodium through a pore in the vessel wall, and creep into the surrounding connective tissue. If the irritant which causes the inflammation is such that it will not paralyse the protoplasm of the leucocyte nor prevent the vessel wall from responding to its tactile sensibility or adhesiveness, emigration must take place, for nature must assert itself.

After the leucocytes have passed out of the vessel they begin to wander, so that emigration is succeeded by migration. They migrate to the seat of irritation; and this migration is also mainly a pseudopodial act, although it is no doubt favoured by concomitant conditions, such as the exudation currents and the diminished resistance of the tissues. It is now generally believed that the migration to the seat of irritation is due chiefly to an attraction of the leucocytes by the chemical products of bacterial activity or tissue destruction, *i. e.* chemiotaxis. Experiments have shown that certain substances will attract leucocytes, and amongst such substances we find the albuminoid bodies contained in the bacteria (proteins) and the earlier products of decomposition or necrosis. That chemiotaxis, or rather the chemiotactic irritability of the leucocytes, is an important factor in their migration cannot be questioned, but it does not explain altogether why the cells collect in the inflamed area. In pneumonia, for instance, a whole consolidated lobe may show all the alveoli full of leucocytes, and it is difficult to explain an extensive aggregation of leucocytes on the simple principle of chemiotaxis. We can understand a local and circumscribed attraction, but matters are different when a whole organ is invaded by leucocytes. Moreover if the collection of leucocytes in the inflamed lung were due to chemiotaxis, we would expect the blood in the peripheral circulation to be impoverished in white corpuscles. The contrary, however, is the case; in most cases of pneumonia which run a favourable course there is an almost extraordinary leucocytosis. Chemiotaxis does not, therefore, satisfactorily explain the migration of leucocytes, nevertheless it is a matter which cannot be neglected, and the importance of which must be recognised; but we must not go too far, and say that this migration to the seat of irritation is entirely due to chemiotaxis.

A point of considerable interest is that the various forms

of leucocytes do not show the same tendency towards diapedesis or migration. In circulating blood the following general types of white corpuscles may be found, viz. (1) the lymphocytes; (2) the "multinuclear" or finely granular eosinophile; (3) the large uninuclear, and (4) the coarsely granular eosinophile cells. The lymphocytes are small cells possessing scanty protoplasm and a round nucleus, and are indistinguishable from the small cells of lymphoid tissue. They may form up to 30 per cent. of the leucocytes present in human blood. The large uninuclear cells have a round or kidney-shaped nucleus and abundant protoplasm, and are rare in the blood (2 per cent.). The "multinuclear" cells have a lobed or multipartite nucleus, and their protoplasm is beset with small granules staining pink with eosin. They are abundant in the blood (up to 70 per cent.), and are actively amœboid and phagocytic. The true and genuine coarsely granular cell shows large and numerous granules staining deeply with eosin; they are rare in human blood (up to 5 per cent.), are amœboid, but not phagocytic. During the earlier stages of inflammation, when chemiotaxis is said to be most active, the "multinuclear" (neutrophile) cells leave the vessels in greatest number, and migrate to the irritated area; hence most pus corpuscles belong to this class of leucocytes. Sometimes the coarsely granular eosinophile cells also appear in great quantity. This fact of "selective attraction" proves that we must not take the process of chemiotaxis too literally. The cells which migrate to the inflammatory focus are the most amœboid among the leucocytes, and this demonstrates the close relation which must exist between so-called chemiotaxis, tactile sensibility, and motility. There are certain advantages in this aggregation of leucocytes; they form a cordon around the inflammatory zone, and prevent the invasion of the bacteria and the absorption of the toxic material; the cells being phagocytic destroy the mechanical irritant, and further they assist in clearing away the tissue débris, and prepare the ground for the proliferating connective tissue, and being possessed of chemical activity they also act upon the irritants in solution. At times, however, they collect in such enormous numbers that when an inflammation is very acute and severe, suppuration appears with ulceration and all the dangers of suppuration; emigration and migration may be and generally is scant then, so that in a broad way chemiotaxis must be regarded as a good sign.

Besides leucocytes a fluid transudation leaves the vessels. This is undoubtedly derived from blood-plasma, and in its composition it often differs but little from ordinary plasma. Normally a fluid leaves the capillaries in the form of lymph, but this normal process is exaggerated during inflammation. The amount of transudation varies with the laxity of the tissues, the nature of the irritant, and inversely as the resistance of the tissues and the animal. The transudation is often of great advantage in that it flushes out the part, removing the poisonous irritant, or at any rate diluting it By doing so it may reverse the chemiotaxis; for it has been shown by experiments that a strong solution may paralyse the tactile sensibility and the motility of the amœboid leucocytes, while when diluted the same solution may become an attraction of these corpuscles. Also the transuded fluid may act as a germicide, impairing or destroying bacterial life. Further, this serum may supply the proliferating tissues with nourishment. Equally often, however, the exudation may prove harmful by impairing nutrition, the tissues becoming water-logged, by pressing on vital organs and thus favouring necrosis and gangrene.

Without entering into a lengthy discussion, it may be said that the appearance of the transudation is due to three chief factors, viz. (1) the increased permeability of the capillary wall, (2) an increased lymph secretion, and (3) a diminished lymph absorption. But it must be stated that some observers deny that there is a true lymph secretion, but regard the process as a mechanical one, *i. e.* a filtration under pressure; and, according to them, instead of increased lymph secretion we must put increased filtration due to raised intra-capillary pressure.

The inflammatory exudation consists of plasma or a plasmatic fluid, various enzymes, derived from the bacteria, tissues, or leucocytes, fibrin and its precursors, albumoses and peptones, mucin, bacterial toxins in solution, and also certain germicidal substances. The exudation may or may not coagulate. The coagulation is, of course, due to fibrin formation. When coagulation is well marked we have a fibrinous inflammation, and when it is absent a serous inflammation, while intermediate between these two is the sero-fibrinous inflammation. Again, if many leucocytes appear, we have either a purulent or fibrino-purulent or a sero-purulent form of inflammation.

Fibrinous inflammation.—Under physiological conditions outside the body, plasma will coagulate on the addition of fibrin ferment or leucocytes, and therefore we should expect that in inflammation, wherever there are leucocytes present, fibrin is formed. The absence of coagulation in the case of serous effusion, therefore, requires explanation. It is undoubtedly due to certain inhibitory influences, amongst which may be mentioned (*a*) integrity of the endothelial or epithelial surface; (*b*) absence of fibrin ferment and leucocytes; (*c*) increased alkalinity; and (*d*) the presence of certain toxic or chemical substances, which in small quantities are capable of preventing coagulation. Thus extremely minute quantities of cobra poison will successfully keep coagulation in abeyance, and we may justly believe that certain bacterial substances or tissue products are possessed of similar inhibitory powers. Fibrin generally appears on free surfaces or in enclosed spaces (tonsils, pleura, and pericardium), especially when there is continued superficial friction (heart and lungs), or it may appear as the result of the action of certain, perhaps un-

known, chemical substances; as, *e.g.*, in some bacterial inflammations (diphtheria and pneumonia). It may be formed either immediately or after a delay, the exudation being to begin with serous, and then becoming fibrinous; it may either form a true membrane lying on the free surface, as in fibrinous pericarditis, or it may form an interstitial deposit, as in diphtheria, where the fibrin appears in part between and among the epithelial cells, which undergo a so-called coagulation necrosis.

Serous inflammation.—If the inflammatory plasma does not coagulate, then we have a serous inflammation. The amount of fluid which is poured out varies considerably, and, generally speaking, it is most copious when it exudes from a free surface. The free surface may be lined by epithelium, which is either columnar, as in the nose, larynx, intestine, or uterus, or it may be lined by squamous epithelium, as with the conjunctiva and vagina. A serous inflammation in connection with free epithelial surfaces is generally called a catarrh; the exudation generally contains much mucus. On the other hand, the effusion may exude from an endothelial surface, such as the pleura or peritoneum. It is possible that coagulation does not occur because the epithelium or endothelium is intact, or because there are inhibitory influences which counteract and prevent coagulation.

Instead of trickling from a free surface the exudation may collect in the tissue substance, *i. e.* we have an interstitial serous infiltration. This may occur either in the connective tissue (inflammatory œdema) or between the layers of the epithelium (vesiculation). An inflammatory œdema is often observed when there is extensive fibrin formation,—as, for instance, in croupous pneumonia; on cutting into the consolidated lung, fluid generally exudes copiously. Again, the serous effusion may subsequently coagulate, either completely or in part, producing a so-called sero-fibrinous inflammation. In cellulitis and acute septic inflammations the œdematous infiltration is as a rule well marked; and, broadly speaking, the weaker the local or general resistance of the individual the more marked the inflammatory œdema. The fluid which is poured out may be completely absorbed, or it may stagnate and then lead to a chronic or persistent effusion, or to necrosis and gangrene of the part by impairing the nutrition of the tissues, which become softened and water-logged.

A good example of a serous inflammation, which is usually not recognised as such, is acute parenchymatous or tubal nephritis. Here, as elsewhere, the inflammation affects the connective tissue supporting the renal tubules; the vessels dilate till eventually retardation or stasis occurs; a fluid exudes, passing in part into the interstitial tissue, which becomes thereby œdematous in part, or being discharged directly into the glomerular capsules or uriniferous tubules to be drained away with the urine, producing the characteristic albuminuria. Blood-cells are also frequently discharged in numbers, and they also collect in part in the connective tissue and in part appear in the urine, the red corpuscles causing the hæmaturia of acute nephritis, and

Fluid constituent of inflammatory exudation

Coagulation = fibrinous inflammation	*Absence of coagulation* = serous inflammation { sero-fibrinous / sero-purulent
(*a*) Interstitial = diphtheria	(*a*) Interstitial = inflammatory œdema, vesicles
(*b*) Free endothelial surfaces = fibrinous pleurisy	(*b*) Free endothelial surfaces = serous effusion
(*c*) Free epithelial surfaces = membranous tonsillitis / croupous pneumonia	(*c*) Free epithelial surfaces = catarrh.
Result { Destruction and removal = resolution / Organisation = induration	Result { Discharge = catarrh (restitution) / Absorption = resolution / Stagnation = chronic effusion / Coagulation = fibrinous or sero-fibrinous inflammation (q. v.)

white corpuscles may always be observed in acute albuminuria. The epithelium of the glomerular capsule and the tubules suffers, because there is an acute inflammation of the connective tissue, whereby their nutrition is greatly impaired. The term parenchymatous inflammation is unjustifiable, because the inflammation is essentially interstitial, as all other inflammations are; there is no such thing as an inflammation of the epithelium.

Purulent inflammation.—If the emigration and aggregation of leucocytes is excessive, coagulation being at the same time absent, the exudation becomes converted into pus. Macroscopically, pus in its usual form is a thick, creamy, viscid, light yellow or yellowish fluid, with a faintly sweetish sickly odour; such is the so-called laudable pus of older writers. On allowing it to stand it separates into two portions, a serous element, the liquor puris, and a whitish sediment, the pus corpuscles. Although pus consists of inflammatory plasma and leucocytes, it is a characteristic of it that it does not coagulate, so that there must have been influences or substances which, during the process of pus formation, inhibited coagulation completely. Microscopically, the most important constituents of pus are the pus corpuscles. These are round cells, which are mostly of leucocytic origin. In fibrinous inflammation, *e.g.* in pneumonia, the number of white corpuscles present may be as great as that which we find in pus, but the fact that coagulation has taken place is a distinctive character, and therefore the pneumonic process cannot be compared to a suppuration, as has been done by some observers. The leucocytes which constitute the pus corpuscles are mostly and generally of the so-called multinuclear or neutrophile (finely granular eosinophile) variety. Sometimes, however, the number of coarsely granular eosinophile cells

present is striking; anyhow it is the actively amœboid corpuscles which mainly occur in pus. But besides the typical leucocytes young connective-tissue cells are often found, and these are generally included in the term pus corpuscles. It is frequently stated that pus corpuscles are degenerated or dead leucocytes and connective-tissue cells. This, however, is erroneous; many of the cells are no doubt degenerated or dead, but, on the other hand, many are still amœboid, well preserved, and phagocytic, as may be seen on placing fresh pus on the warm stage of a microscope.

Before studying the chemical nature of pus a few words must be said concerning the pathogenesis of suppuration. In most cases micro-organisms are present, so that we must conclude that pus is generally of bacterial origin. It may, however, also appear independently of micro-organisms. Thus it is possible by means of nitrate of silver, turpentine, castor oil, perchloride of mercury, and other chemical substances to produce a suppuration without micro-organisms appearing (sterile suppuration). Similarly, continued irritation—as, for instance, the presence of metal in the anterior chamber of the eye, and the products of necrosis—may call forth a suppurative process. Chemical irritation, therefore, is a cause of suppuration; we must believe that a continued irritant produces a necrosis, and that the products of necrosis act as a chemical poison. Buchner has shown that the latter act positively chemiotactic, *i. e.* attract leucocytes; and he has further shown that croton oil causes a necrosis of the tissues, and that it is the products of necrosis which call forth suppuration.

In most cases, however, micro-organisms are found, so that pus is generally of bacterial origin, a point of fact which the surgeon especially should remember. There are some bacteria which are so constantly found in pus that they are regarded as pus-producing or pyogenic organisms. These mostly belong to the group of micrococci, and the commonest forms are the following. I. Staphylococci: (*a*) *Staphylococcus pyogenes aureus;* (*b*) *Staphylococcus pyogenes albus;* (*c*) *Staphylococcus pyogenes citreus.* II. Streptococci: (*a*) *Streptococcus pyogenes;* (*b*) *Streptococcus erysipelatis;* and (*c*) *Pneumococcus.* Most authorities are inclined to believe that the *Streptococcus pyogenes* and *erysipelatis* are one and the same organism. These are the pyogenic organisms, or pyococci; each variety may occur by itself, or any combination of them may be found—mixed infections in pus are extremely common. Other microbes may, however, produce a suppuration,—as, for instance, the bacillus of typhoid fever, the gonococcus and the bacillus of tuberculosis; yet they are so markedly specific in their action that they are not included among the pyogenic organisms. How do these germs produce suppuration? Buchner has clearly shown that they do this by chemical irritation, for the dead bodies of the protoplasmic substances (proteins) of the bacteria will produce suppuration as effectively as or even better than the living organisms. Therefore the true cause of suppuration is chemical irritation. The chemical irritant is extremely chemiotactic, and stimulates the leucocytes to emigrate and to wander to the seat of lesion. We have, therefore, two necessary conditions without which there can be no pus: (1) chemiotaxis and aggregation of leucocytes, and (2) inhibition of coagulation. There is, however, a third factor, viz. histolysis or tissue destruction. Under the influence of pus formation the tissues are dissolved and disintegrated, and according to the law of repair the tissues must react against this dissolution, and they do so by proliferation and an attempt at forming new cells. This new formation of tissue may be observed at the margins of any suppurating focus, and it is on this account that connective-tissue cells are so frequently found in pus.

The fluid constituent of pus consists of serum devoid of fibrinogen, of albumoses, and peptones, toxins of bacterial origin, and the products of degeneration. The albumoses and peptones are in part due to the digestive or proteolytic action of the micro-organisms concerned, and partly to a similar action on the part of the pus corpuscles themselves, and it is probable that the histolysis depends on this proteolytic property of pus. Although pus is generally produced by bacterial irritation, it is a curious point that it forms a bad soil for the growth of bacteria, and is distinctly germicidal; and we find, therefore, that pus which has been long pent up in the body is sterile, the pyococci having been gradually destroyed. The chief physiological properties of pus, therefore, are the following: it is (1) bactericidal, (2) histolytic, (3) contains phagocytic elements, and (4) is a strong solvent; for Leber has shown that it is capable of dissolving such metals as platinum and copper, which require strong acids for their solution. There can be no doubt, then, that suppuration must be frequently a useful issue of the inflammatory process, assisting in the destruction of the irritant and in stimulating the tissues to react by proliferation. On the other hand, suppuration is often a source of great danger by destroying the tissues, and especially by laying open the vessels, and thus offering serious chances for complications, such as septicæmia and pyæmia.

Specialism in General Practice.

A Paper read before the Abernethian Society on February 25th, 1897.

By E. H. Edwards Stack, M.B., F.R.C.S.

I WISH this evening very shortly to mention a subject which seems to me to be of great importance to those of us who are going into what is called "general practice;" that is, to join a class of men for whom I have a profound respect, who are overworked, underpaid, and amongst the most sympathetic and kind-hearted in the kingdom. We are all apt while still in the hospital to run them down a little, and I think I can partly show you the reason why.

Adam and Eve had to do everything for themselves, they had no

servants, and required no doctors; owing to the scarcity of the population there was no competition, and so they managed very well. Specialism had not yet begun. It was not long, however, before the natural result followed, that for the better working of the community specialism started, and has ever since increased, not only among individuals, but in departments; and in most cases this is best.

If a man happens to have wonderful muscular development beyond other men, what is more natural than that he should not only gain his own livelihood, but amuse thousands by tossing "fifty-six pounders" about like cricket balls, or by allowing a couple of elephants to play at see-saw across his back? or what could be finer than to see a surgeon of a great hospital like this cut down and remove a vesical calculus in thirteen seconds?

But with general practitioners the case is different; to the public he is a specialist for every kind of ailment. They have a disease and wish it cured; no matter where it is situated, he is supposed to know all about it. Alas! very often he doesn't, and either thinks he does or has to pretend to.

And so this sort of thing often happens. Say a patient is deaf; after a course of medicine, or perhaps syringing for some time, he *sends* him (or still more likely the patient *goes himself*) to an "ear doctor," who discovers adenoids, and recommends him to consult a throat specialist, who in turn says he ought to be operated on, but as east winds are prevalent he had better wait a few months, and so he returns home. He does not thank his own doctor for the round he has made or the guineas expended, whereas the adenoids, both easy to diagnose and cure, might have been removed at home long before, and the general practitioner rendered famous in that house at least.

Now if we learn—and this is the pith of my remarks—something of each branch, and it need not be very much, we shall know in the first place whether we can undertake to cure a case or not, or in the second whom to send a patient to, and when to send him. That is, we use the pure specialist to confirm our opinions or to treat a case too difficult for us, and *not* for diagnosis.

Some may have realised what a worry it is to a conscientious doctor to know what to do when he is not quite sure of his diagnosis, and yet the case is not serious enough to need a consultant.

A "G. P.," as we call him—and one could often question his right to such a name—deals mainly with "ordinary medical cases." He may or may not have some particular subject he is interested in, and if he has, so much the better, both for him and the patients; but of most he is ignorant, either from never having acquired them, or having forgotten what he knew. Well, these medical cases are all important, and rightly do we spend most of our time here in acquiring their knowledge; but if a few months were spent, especially after qualification, in getting an intelligent hold of the other branches we should find it of incalculable service.

I feel quite convinced, and I wish to lay particular emphasis on this, that there is nothing which will gain us so much credit, and therefore so many patients, as the treatment of these cases; and often when a man has got past the worry of a whole practice he can fall back on some branch he has made a reputation in. "Any one can tie a pile."

Supposing two men covering the same ground and about equally capable—a fairly common circumstance,—surely the one who can feed a baby, dilate a stricture, or fit a truss is the one who will forge ahead; and remember when one patient in a house is acquired, the rest follow as a matter of course. To illustrate what I have been saying by a few cases, I know of one which had been treated for three months' metrorrhagia, supposed to be due to cancer, but which had never been examined *per vaginam;* a friend of mine taking a *locum* there put in a speculum, and removed a mucous polypus,—she was quite cured of her cancer in five minutes.

I saw a boy lately who had had headaches ever since he went to school two years before, and had been taking medicine on and off during that time; a pair of convex glasses completely cured him, and yet that was a very simple eye case.

I saw a girl the other day in the country with a pain in her foot; I thought it was early tubercular disease, and recommended plaster of Paris. I knew nothing of orthopædics at the time, but I feel sure now that it was a case of incipient flat-foot, and plaster the worst thing for it.

A case apparently convalescent from typhoid fever (diagnosed on an irregularly raised temperature, pain in the abdomen, and diarrhœa) had lasted six weeks, and no further physical signs developed; no vaginal examination had been made, because she was not married. One day she suddenly collapsed with symptoms of peritonitis. A Bart.'s man who happened to be there examined her, and found a suppurating ovarian tumour which had ruptured; but it was too late—she died.

A lady I was treating for something else told me she was deaf in one ear, and had been for two years. Her doctor said it was chronic; in that, at any rate, he was not far wrong. The removal of some wax quite restored her hearing.

Every eye department at a hospital occasionally has cases of glaucoma, due to the "hope it will do good," treatment of putting in atropine on chance; and if a mistake like this gets known it is very damaging. That patient keeps his eye on the doctor for many a year. A set of false teeth will often convert a chronic dyspeptic into a new woman. I have removed adenoids in the country several times, but the *kudos* was not for me, but for the local man who discovered what was wanted.

Men sometimes say you can't examine patients in private as you can in a hospital; I can only say I have never known a woman refuse even a vaginal examination if it was said to be necessary. The more careful the doctor is, the more they think of him; and if he thinks fit to examine with a series of "scopes" one after the other, even if he finds nothing, yet that is a useful negative, and the patient is impressed, and rightly so. To acquire patients legitimately is our prime object, and then to cure them; and it is quite impossible to avoid overlooking something belonging to one of the special branches unless we have at one time been familiar with it.

I feel sure even in my own case that I have made much more impression by being able to remove a nasal polypus, which would not have killed the patient, than by diagnosing a difficult case of typhoid fever. Yet the latter might be called our bounden duty, and the backbone of our practice; and the former a lucrative trifle, but the one which gains the patients. Any one can place a stethoscope on a chest and look serious, and the patients have no estimate of the knowledge gained, but they can say who removed a tooth well or ruptured a perinæum.

Just one word about diseases of women; many will let their own doctor examine them, and no one else,—I mean they would go to no one else. If he finds an ovarian tumour, he can perhaps save their life by persuading them to have it removed; the same remark applies to an early case of cancer, or, to quote that great man, Dr. Matthews Duncan, "What a grand thing it is to be able to say, 'You've not got cancer.'"

Dr. Gee says, "No matter where you are, half your practice will be children; and yet perhaps no complaint is so common amongst young practitioners as 'I wish I had done some work at a children's hospital!'"

Another subject very little attention is paid to in hospital is prognosis, and there is no need to emphasise its importance, not so much with a view of benefiting the patient as to insure our own position.

We may think we are fully equipped when we have been round the departments in a hospital like this, but unless we think, as we are learning each subject, "How would I manage this in private?" we shall find ourselves one day at a loss. A leg has to be massaged, and we should like to instruct the patient's mother; but we are compelled to read it up, and that is never the same as having had a few practical lessons.

Now you may say, "How can we get time to do it all?" If in the first place we remember this when doing our ordinary appointments, and never lose an opportunity of putting a mirror down a throat or a finger up a rectum, then we will find that a very few months after qualification spent in the departments not yet attended will not only be interesting and useful to ourselves, but may save many a patient's life.

In fine, though I would not go so far as a pamphlet published in Paris called 'Every Man his own Lithotritist,' yet I would like to uphold this maxim, "Every general practitioner his own specialist."

A Case of Spinal Injury followed by Recovery.

By E. G. SIMMONDS, M.R.C.S., L.R.C.P.

THE following is a brief account of a case of spinal injury which occurred on board the ship "Hesperus," during a voyage to Australia.

S. M—, æt. 26, able seaman, met with an accident on November 9th, 1896.

November 9th (10.45 a.m.).—Patient fell from a height of four feet on the deck of the ship, alighting on the back of his neck, so that

his head was "doubled under him." Immediately after the accident patient was in a state of collapse. Face pale, breathing shallow, pulse small, intermittent and slow. Did not lose consciousness. He immediately lost all power in his arms and legs, and complained of numbness and tingling in the right arm and leg. He was immediately placed on an improvised stretcher, and removed to his berth; he then vomited twice.

About half an hour after the accident his condition was as follows:—Loss of power in the arm and leg on both sides, but more especially on the right side. Severe pain in the right shoulder and the cervico-dorsal region of the spine. Hyperæsthesia in both arms and legs Knee-jerks increased on both sides. Pupils reacted normally, and of equal size. No headache, or anything pointing to head injury.

At 6 p.m. (seven hours after the injury) patient had regained the use of both legs, and sensation in them was normal. The right arm was still quite motionless and hyperæsthetic. Left arm: patient could raise his left hand to his mouth, but had a very feeble grasp; sensation not materially altered. There was also a hyperæsthetic area over the right pectoralis major muscle, but apparently not elsewhere on the chest. Knee-jerks now appeared to be diminished.

10th.—Patient passed a very restless night, and had only an hour's sleep. Has complained of a good deal of pain in the back of the neck and right shoulder. There was no evident deformity of the spine, and no signs of injury, dislocation or otherwise, about the right shoulder. Temperature this morning 100° F. Pulse 84, regular, good volume. Respirations 20. Patient has not passed water for the last twenty-four hours. Has great discomfort; he feels the desire to micturate, but is unable to do so. Every available catheter was tried, but none would pass into the bladder. The passage of the catheter caused great pain, though done as gently as possible; it seemed to be arrested at the membranous portion of the urethra. Patient denied having ever suffered from gonorrhœa, and had never had an instrument passed before.

A full dose of tincture of opium was given, and hot sponges applied continuously to the perinæum for an hour, with the idea of removing any urethral spasm which might be present; this did no good as far as passing a catheter was concerned. There had been no incontinence of urine from overflow, the bladder was evidently full, and presented a central swelling in the abdomen, with percussion dulness as high as the umbilicus. As his symptoms of retention were becoming urgent, it was decided to try the effect of a hot bath. A bath having been placed by his bedside, the water being as hot as could be comfortably borne by the hand, patient was lifted, blanket and all, into the bath and suspended as if in a hammock, special care being taken to support the head, so that no displacement of fragments might occur, should there be a fracture of the spine present. After remaining suspended in the bath for ten minutes, patient began to pass his water voluntarily, though he had much difficulty in commencing the act. The urine passed was acid and quite clear, and in a good stream, so that a stricture, if present, must have been a very slight one. While patient was passing his water in the bath I tried to pass a catheter, but with the same want of success, owing to the pain it caused and probably the spasm it gave rise to. Patient was then removed from the bath, thoroughly dried, and carefully placed between dry blankets, when a cup of hot beef tea and brandy ʒss were given to him.

11th.—Another restless night; obtained some sleep after several small doses of tinct. opii. Passed water voluntarily in the night, but bladder is very distended this morning and causing much discomfort. Had to resort twice to-day to the hot bath, to get patient to empty his bladder. The urine remained clear and acid. Every precaution was taken in moving the patient, as in yesterday's note. Patient's bowels have not been opened since the injury, though calomel (gr. v) was given at once. Temperature normal.

There is scarcely any change noticeable in the condition of the right arm since the accident; there is absolutely no movement, and well-marked hyperæsthesia, so that even a fly crawling on the arm gives pain. The left arm has certainly improved, and can be raised more easily by the patient, while the grasp of left hand is stronger. The legs have quite regained their power. Respiration almost entirely abdominal.

12th.—In much the same condition; the use of the hot bath still necessary. Bowels not open.

13th.—Bowels opened after calomel gr. v; hot bath as usual; left arm still further improved; right arm still powerless, but less hyperæsthetic.

14th.—Some difficulty in breathing, but no physical signs in chest.

15th.—Hot bath still necessary and effectual. Urine quite clear and acid. Can now raise his right arm from his side, but chief loss of power is in the forearm. No grasp in right hand. Still complains of pain in the right shoulder. Left grasp still further improved. Has a good deal of respiratory trouble to-day, and is using his muscles of extraordinary respiration. The chest appears to be moving very little, while the abdominal walls appear to be working more than naturally in respiration. The percussion note is dull at both bases behind, and moist sounds are numerous at the bases, with rhonchi all over the chest.

18th.—Much improved. Breathing easier, fewer moist sounds. Left arm practically recovered. Right arm continues to improve; sensation normal. No signs of bedsores.

22nd.—Right arm still further improved; the upper arm has very fair movement, but there is only slight power in the forearm and hand. Patient can now pass his water naturally. He is still troubled with slight bronchitis, which is being treated by Vin. Ipecac. and ammonia internally, with mustard poultices externally.

December 4th.—Patient still suffers from attacks of dyspnœa, with moist sounds at the bases of both lungs; these attacks are worse some days than others. As to the paralysis, the left arm has completely recovered, while in the right arm the extensors are the muscles chiefly affected. Thus the patient cannot extend the elbow-joint when it has been fully flexed. There is some wrist-drop, while the fingers of the right hand cannot be extended fully.

24th.—The right triceps is still very weak, but there is no wrist-drop. Patient is unable to extend the little and ring fingers of the right hand; he can extend the other fingers, and has a fair grasp. Patient has been on his back for six weeks, and is now allowed to get up for a short time every day.

January 3rd.—Patient has much improved, and is doing light work on deck; attending twice a week at one of the Melbourne hospitals for galvanism. What is most noticeable now is the dropping of the little and ring fingers of the right hand. The muscles of the right arm feel more flabby than those of the left, but there is no very obvious wasting.

February 17th.—Patient says he is now as well as ever he was. Power in right arm almost totally restored. He has a strong grasp in the right hand. Percussion over the lower two cervical vertebræ causes some pain. There is no obvious angular curvature of the spine. Patient is doing his ordinary work on board, and can now go up aloft.

Since last note patient has left the ship, according to his own account "as well as ever he was."

Among the points which the above case serves to illustrate may be mentioned the fact that, after an injury in the lower cervical region of the spine due to indirect violence (such as falling on the back of the neck and doubling the head under the body as in this case), though there may be at first total loss of power below the seat of injury, yet this loss of power may partially be regained in a few hours after the injury according to the amount of damage to the spinal cord at the seat of injury. In this case power was regained in both legs and partially in the left arm seven hours after the injury, though the right arm remained paralysed, and did not completely recover for three months.

Another point which presented itself was: "What to do in a case of spinal injury, when there is retention of urine, with urgent symptoms, and a catheter cannot be passed into the bladder." It was obviously necessary to empty the bladder at once, and by the simplest means possible. The easiest means of doing this—the catheter—had failed. A hot bath was the next thing that suggested itself, but it was a very serious question as to whether it would be justifiable to move a patient as to the nature of whose spinal injury there was necessarily some doubt; for although there was only partial loss of power, yet movement of the patient, should there be a fracture-dislocation of his spine, might bring about displacement of the fragments and further injury to the spinal cord. However, all things being considered, among others the urgency of the symptoms of retention of urine, a hot bath was decided on and given with the precautions mentioned in the note, so as to reduce to a minimum the danger of displacing fragments of the injured vertebræ. Seven men (three on either side, and one to support the head) were required to suspend the patient in the bath as in a hammock. The result was quite satisfactory, both immediately and ultimately. Three months after the injury patient was at his work again, and expressed himself as being "as well as ever he was."

Contributions towards a History of the Surgical Teaching at St. Bartholomew's Hospital during the Nineteenth Century.

By D'ARCY POWER, F.R.C.S., F.S.A., Demonstrator of Practical and Operative Surgery.

III. THE DEMONSTRATORS.

IN former articles we have spoken of two out of the three great Lecturers on Surgery at St Bartholomew's Hospital. Of the third it would ill become us to speak for the present. His loss is still a personal one, the mark of his individuality is still upon the School, and the echoes of his magnificent periods have hardly yet died away from the larger lecture theatre, to which his oratory attracted some of the best speakers in the profession.

We turn, then, from the lecturers to the demonstrators. Then, as now, the demonstrators were a most important factor in the School, and the names of Stanley "the little butterman," of "Tommy" Wormald, and of Skey still linger in the memories of the older students, who ever think of them as demonstrators, forgetting that each in due season served the high office of President of the Royal College of Surgeons of England.

Of the three demonstrators who succeeded each other in linear succession, Stanley first, then Skey, afterwards Wormald, Stanley was by far the most able scientific man. His "Illustrations of the Effects of Diseases and Injury of the Bones" was conceived and executed in the true Hunterian spirit, and the specimens which he collected to illustrate it are still some of the best and most interesting in the museum.

Born July 3rd, 1793, his mother being a sister of Thomas Blizard, Surgeon to the London Hospital, Stanley was educated at the Merchant Taylors' School. He was apprenticed to Thomas Ramsden, a surgeon at St. Bartholomew's Hospital, and when his master died in 1810, Stanley was "turned over" to John Abernethy to serve the remainder of his term. Even during his apprenticeship his love of morbid anatomy was so great that, with Abernethy's assistance and approval, he enlarged the museum to such an extent that he practically created it. Ill-fortune, however, condemned him to the dull routine of the dissecting room and the anatomical lectureship, so that a good pathologist was driven to become little more than a schoolmaster. All inclination for original work seems to have been crushed out of him, until he became what Sir James Paget remembered him: "Mr. Stanley lectured on anatomy and physiology every day except Saturday at half-past two. The physiology was, even for that time, feeble, dull, and barren, and the anatomy was very elementary; but he lectured so carefully and clearly, he was so deliberate and simple, so grave and earnest, he repeated all the "tips" so frequently and so variously, yet without changing one important word, that I believe there was not one in London who taught a larger proportion of his class than he did. Besides, his appearance and his manner were very strange, easily remembered and imitated; and with them his words were well remembered too. It was believed that a pupil, who afterwards became a distinguished writer in *Punch*, passed the College in anatomy solely by means of the bits of lectures with which he used to make fun by imitating Stanley." Stanley acted as foil to Lawrence almost throughout his life. "Lawrence," says Paget, "was inimitable, and he never seemed in difficulty; Stanley made all see the value of dull hard work, the need of learning the very commonest facts. His plodding day's work was a daily lesson, and the story of his life was full of teaching; for after striving against many difficulties, he became constantly more esteemed, more gladly worked with by those who knew him well, and these became constantly more numerous. He was a true and truth-loving man, keenly conscious of his duty, and resolute in doing it." But Mr. Willett has already told the story of Stanley's life and work in this Journal (vol. i, p. 146), so that there is no need to dwell upon it here. Suffice it to say that I cross-examined Mr. Mark Morris one day, just before he died, as to the exact place of Stanley's death, for, as is well known, he died of cerebral hæmorrhage after an hour's illness on Saturday, May 24th, 1862. He had just examined a patient with a diseased knee in the front ward of Henry when he staggered against a bed and sank on to the floor. The dressers of Sir William Lawrence, whose ward it was, raised him and put him on the "state" bed, then unnumbered, now No. 6, in the front ward of Henry, where he soon breathed his last.

Frederic Carpenter Skey (1798—1872), Abernethy's last demonstrator of anatomy, had also been apprenticed to him. It is said that his master was so impressed with the tact and clinical ability of his pupil, that he employed him during the later years of his servitude to attend upon his private patients. By Abernethy's interest Skey was appointed Demonstrator of Anatomy in 1824, an office he resigned in 1828 in consequence of a dispute with Lawrence.

The direct outcome of Skey's separation from the teaching staff of St. Bartholomew's Hospital was the revival of the Aldersgate Street School of Medicine, where Skey taught surgery for the next ten years, though he had been elected an assistant surgeon at St. Bartholomew's Hospital, August 29th, 1827, becoming full surgeon in 1854. He lectured upon anatomy for the long period of twenty-two years, from 1843 to 1865.

Skey's prolonged experience in the out-patient room sharpened his natural aptitude for clinical surgery, until he became skilful to ingenuity in diagnosis. He put an end to the bleeding, cupping, and purgatives which formed so marked a feature in the treatment of disease fifty years ago, and his principles still linger in the out-patient room of the Hospital, for he was the first to advocate the "tonic" treatment. We owe to his teaching the enormous quantities of

Hst. Q. cum F. which are still ordered daily for the anæmic surgical patients who apply for relief; whilst in the operating theatre he exercised an influence for good by his energetic protests against the use of the knife except as a last resource in the surgical treatment of disease.

Thomas Wormald (1802—1873) was the last of Abernethy's apprentices, the Benjamin of his old age, and so consummate a mechanician that Abernethy employed him as prosector, to teach the junior students, and to assist Stanley in putting up preparations for the museum long before he was out of his articles. Familiar with Abernethy as his resident pupil, and naturally outspoken, Wormald treated his master with scant reverence. It is told of him that one very wet evening Abernethy came from Bedford Row to lecture on surgery. He was sitting by the fire in the old museum, and complained that his feet were wet. Wormald said, "Didn't you come in your carriage?" "No," says Abernethy,—"Old Johnny," as he was called, "Mrs. Abernethy wanted it to take the children to the theatre." "Well," says Tommy, "you had a shilling in your pocket, why didn't you take a hackney coach?" "I didn't think of that." "Then I don't pity you," says Wormald, "it serves you right." To which Abernethy replied with a smile, "You are a pretty impudent fellow, Tommy."

In 1824, when Abernethy contemplated retiring from the lectureship of anatomy, he made arrangements that Stanley should succeed him as lecturer, and that Wormald should act as demonstrator at a salary of £150 a year, so long as he could keep the class together. Wormald, overjoyed, promptly proposed to a lady, who accepted him; but when the time came for making the appointment, Skey claimed it and was elected. Wormald was therefore nominated house surgeon to Lawrence in October, 1824, and it was not until 1826 that he was appointed, conjointly with Skey, to act as demonstrator of anatomy. Skey left the hospital in 1828, and Wormald then continued to act as sole demonstrator. For fifteen years Wormald ruled his class with a rod of iron. Beer and tobacco he banished from the dissecting rooms. As to smoking, he positively disliked it. Seeing a man once dissecting with a cigar in his mouth, Wormald told him with a threat to take it out. Next day four-fifths of the men were smoking. Wormald came, walked through the rooms, and left without a word. The day after not a cigar was to be seen in the rooms, nor has the habit ever been resumed there since. Sir James Paget says of him, "The more influential teacher was Mr Wormald. . . . Among the majority of the students he was the most popular of all the lecturers; a shrewd, hard-headed man, without any science, but with abundant common sense, directness, and good mechanic skill. He gave the demonstrations, that is the daily morning lectures on anatomy. For then and during several years later there were really two courses of lectures on anatomy. In Stanley's, anatomy (both general and descriptive) and physiology were combined. The arrangement was according to structures—bones, muscles, arteries, and so on, and these were called the lectures.

"In Wormald's, anatomy alone was taught, and in the order of the parts dissected—arm, leg, neck, and so on, and these were called demonstrations. They were completely practical and often very instructive. He omitted what he did not like or did not know, but what he did teach he taught well, in plain English and with good illustrations. It was not then generally thought amiss that he told many stories, some of which were obscene, some nasty;" but Wormald was brought up in the early years of the century, and if the manners of the Regency were coarse, the speech of the time was coarser. As a teacher of surgical anatomy Wormald has seldom been surpassed, whilst his surgical teaching was strictly clinical. His plan of instruction was to single out a student, give him a case to examine, and then test his knowledge by questions. Himself no great reader, he rarely referred his pupils to books, but taught them to rely chiefly on the observation of nature. Hard-working students were attracted to him by his kind and familiar manner, but idle ones he repelled by his known power of sarcasm.

Notes.

For the first time in the history of the University of Cambridge has a medical graduate been raised to the dignity of its Vice-Chancellor. We congratulate Dr. Alex. Hill upon his election to this high office, at the early age of forty-one. He was, as we all know, a distinguished student of Bart.'s twenty years ago. He was a contemporary of Dr. Tooth, Dr. Herringham, Mr. Bowlby, and Mr. Lockwood, and in his student days was a prominent debater at the meetings of the Abernethian Society. Dr. Hill was elected Master of Downing College in 1888; and before this the last Medical Master of a college at Cambridge was Dr. John Caius, founder of the college bearing his name. The great Harvey is said to have been Vice-Chancellor of Oxford University, but this, we believe, is an error. He certainly was Warden of Merton College in 1644, and this office he held for only a few months.

* * *

The Opening Addresses at the Medical Schools this year seem to us to have been only moderate performances. They lack originality, and are mostly very dry reading, and feeble in the extreme. We are glad that the authorities in our School are wise enough to look with disfavour on opening addresses. It is, we believe, many years since one was given at Bart.'s. Perhaps other schools need more advertisement.

* * *

We beg to offer our newly elected Entrance Scholar in Science, Mr. W. Morley Fletcher, our congratulations on his election to a Fellowship at Trinity College, Cambridge. It is a recognition not only of the interesting researches which he has undertaken, but also of the claims of physiology upon the older universities.

* * *

Mr. Gilbert Smith has taken the degree of M.B. in the University of Durham.

DR. DUNDAS GRANT, who for some time was conductor of the Hospital Musical Society, has been elected President of the British Laryngological Association.

* * *

OWING to the dearth of candidates for the Army Medical Service, a new regulation regarding the Examination will shortly come into effect. Candidates for the Indian and Army services will not in future be required to state *which* service they are competing for, and those who pass the Examination may choose their service afterwards in order of merit. The regulation virtually allows the unsuccessful candidates (who obtain the requisite minimum of marks) for the Indian Service to accept a commission in the Army.

* * *

THE SCARCITY of candidates for the Army Service seems to us to offer unusually good prospects to well-qualified men seeking employment, for with the present depleted state of the service promotion must be rapid, and the conditions of service, after all, are not so bad as they are made out to be.

* * *

WE HEAR with much regret of the death of Dr. C. S. Roy, Professor of Pathology at Cambridge. He had been unable to discharge his duties for over a year, and, as is well known, Dr. Kanthack had accepted the office of his Deputy. Professor Roy married a daughter of Sir George Paget, late Regius Professor of Medicine, but there were no children. The funeral took place on October 8th, and was largely attended by his friends and colleagues.

* * *

MR. HOWARD MARSH will read a paper at the East London District of the Metropolitan Counties Branch of the British Medical Association on October 21st. The subject is "Operative Surgery of the present day in its application to Affections of the Joints."

* * *

WE HEAR that Dr. West is about to commence the usual class in the wards, in Commentaries for the London M.D. It will begin on the first Wednesday in November at 4 o'clock, and will be taken once a week.

* * *

MR. A. N. WEIR won the Ladies' Cup in the Golf Competition on October 16th at Stanmore, finishing one down to Bogey.

* * *

DURING the summer a Golf Handicap was organised, and there were twenty-eight entries. The Staff were represented by Sir Thomas Smith, Mr. Howard Marsh, Mr. Bowlby, Dr. Griffith, Dr. Herringham, and Mr. Edgar Willett. There were many exciting matches, and the handicapping worked out on the whole with excellent results. In the semi-final round Mr. Lance (10) beat Mr. Harmer (4), 5 and 4, and Mr. Furnivall (7) beat Mr. Laming Evans (7), 4 and 3. In the final round Mr. Furnivall beat Mr. Lance, 6 and 5, thus winning the handicap. This is the first Golf Handicap that has been played in the Hospital, and its success, in a large measure due to the energy of Mr. W. D. Harmer, the organiser, leads us to hope that a Golf Handicap may now be looked upon as an annual event.

* * *

THE continued popularity of the Bacteriology course provided here is evinced by the number of men from other hospitals who are attending it. At the present rate of extension of the work done by the pathological department, the question of accommodation for its various activities will soon become a serious one.

Dr. MAIDLOW asks us to make the following corrections in his paper published last month. (1) The word "monosyllable" in the note on page 186 is a slip of the pen; "single expression" is the correct phrase. (2) The quotation on page 190 contains the word "vent," which is of course a misprint for "veut." (3) The accent on the word πλήγη is obviously wrong.

* * *

WITH this number a new editor takes office, Dr. H. B. Meakin having resigned the position which he has filled so long and ably. He leaves the JOURNAL in every way a more flourishing institution than he found it, and only those who have been closely associated with the work can realise how much of its success is due to the late editor.

* * *

AT THE MOMENT of going to press we learn that the entry for the year 1897–8 is 188, divided as follows:

Full entries	97
Special entries to lectures or Hospital practice	69
Preliminary scientific class . . .	22
	188

* * *

These figures compare favourably with last year both in regard to full entries and entries to special courses, for the figures then were—

Full.	Special.	Preliminary Science Class.	Total.
84	59	22	165

* * *

THE ENTRIES to the full course show considerable variation during the past six years, whilst special entries appear to be increasing, thus:

Year.	Full.	Special, including Preliminary Science Class.	Total.
1892	112	38	150
1893	95	61	156
1894	119	74	193
1895	105	82	187
1896	84	81	165
1897	97	91	188

Amalgamated Clubs.

NEW MEMBERS.

J. W. Malins.	S. E. Crawford.	W. H. Scott.
L. R. Tosswill.	F. Whitaker.	E. Leverton-Spry.
T. Gillespie.	G. C. Hodgson.	F. M. Boulton.
T. Bates.	G. M. Levick.	N. Maclaren.
L. B. Scott.	F. Harvey.	F. F. Shout.
G. H. Hunt.	H. L. P. Hulbert.	S. W. Milner.
T. P. Baldwin.	C. E. West.	T. R. Couldrey.
R. M. Im Thurn.	C. Murdoch.	C. V. Nicoll.
L. L. Winterbotham.	J. G. Cooke.	J. D. Barris.
P. M. Rivaz.	A. R. Wade.	A. Hamilton.
M. O. Boyd.	J. A. Nixon.	D. M. Johnston.
G. F. Travers.	T. B. Davies.	H. M. H. Melhuish.
H. Gordon-Smith.	W. C. Hirst.	C. O'Brien.
C. S. Kingston.	H. E. L. Purcell.	A F. Forster.
W. A. Murray.	A. Hallowes.	A. H. Bloxsome.

HOCKEY.

The following fixtures have been arranged:

Oct. 9th	...	Blackheath Preparatory School ...Blackheath.
„ 30th	...	Southgate 2nd XI .....Southgate.
Nov. 13th	...	Epping .....
Dec. 4th	...	Ealing 2nd XI..... .....Acton.
Feb. 12th	...	Epsom College ....Epsom.
„ 19th	...	Blackheath Preparatory School ...

As the Club has been elected on the Hockey Association, a full list of fixtures may be expected shortly. It is hoped that some energetic men will become regular players, as a table of wins and losses is published weekly in the *Sportsman*, and it will not look well to see Bart.'s at the bottom.

MATCH.

v. Blackheath Preparatory School. Played on October 9th at Blackheath. We only took down 10 men (one of those chosen not turning up). The School, who were in very good training, had much the best of the first half, and scored four goals. In the second half we had more of the game; the ball was several times near their goal, but we failed to score. Blackheath got two more goals through good forward combination, a thing which was entirely absent on our side, though some of the individual efforts were good.

Team.—Backs, G. B. Nicholson, D. Jeaffreson; halves, G. Harris, C. T. Price, S. H. Pollock; forwards, H. Huggins, F. Bull, A. Ware, T. Johnson, P. B. Grenfel.

CRICKET CLUB.

ST. BART.'S HOSPITAL 2ND XI *v.* WINCHMORE HILL.

Played at Winchmore Hill on July 21st. Scores:

WINCHMORE HILL.		ST. BART.'S.	
G. T. Vint, c Nunn, b Marrett	19	J. W. Nunn, b Moore	58
A. Adams, b Marrett	5	H. W. Pank, b Sale	21
J. C. Sale, b Pank	0	F. H. Maturin, b Sale	12
H. Whitwell, c Farrington, b Boyle	21	A. Farrington, b Scoones	4
H. E. Scoones, b Boyle	9	C. G. Watson, l-b-w, b Sale	5
R. A. Maude, b Turner	2	H. J. Pickering, b Sale	0
T. C. Barry, b Boyle	3	J. M. Collyns, not out	16
L. Favis, b Boyle	0	H. G. Boyle, b Moore	13
E. P. Sugden, not out	7	C. H. Turner, b Sale	14
W. Moore, c Turner, b Pank	3	H. N. Marrett, C. M. Pennefather	did not bat.
F. Markham, b Boyle	0		
Extras	12	Extras	13
Total	81	Total	156

ST. BART.'S HOSPITAL 2ND XI *v.* BLACKHEATH SCHOOL.

Played at Blackheath on July 24th. Scores:

BLACKHEATH SCHOOL.		ST. BART.'S.	
H. M. Norris, c and b Turner	9	C. G. Watson, l-b-w, b Morris	24
F. R. Hodgson, b Turner	7	W. H. Randolph, b Hodgson	25
A. P. Whately, b Turner	4	R. H. Smith, b Morris	17
F. C. Kendall, b Turner	3	J. M. Collyns, c Horne, b Morris	0
J. W. Horne, not out	22	G. Wedd, b Horne	28
H. M. Kendhall, b Collyns	4	C. H. Turner, not out	104
H. Tennant, b Turner	0	A. S. Woodward, b J. Horne	0
H. Morris, b Turner	0	C. T. Price, b Morris	0
E. V. Sargent, b Turner	0	Priday, b Morris	9
W. Smith, b Turner	0	Foucar, b Whately	0
H. B. Horne, b Turner	0	A. N. Other, absent	0
Extras	5	Extras	23
Total	54	Total	230

Turner accomplished a good performance in taking 9 wickets for 12 runs, and scoring 104 (not out) out of 230.

RUGBY UNION FOOTBALL CLUB.

President.—A. A. Bowlby, Esq., F.R.C.S.

Vice-Presidents.—A. N. Weir, Esq., F.R.C.S., J. S. Sloane, Esq., F.R.C.S., H. Bond, H. M. Cruddas.

Captain 1st XV.—W. F. Bennett.

Vice-Captain.—S. Mason.

Hon. Secretary.—C. H. D. Robbs.

Assistant Hon. Secretary.—E. R. Risien.

Captain 2nd XV.—A. Ll. Vaughan.

Committee.—J. K. S. Fleming, A. M. Amsler, A. J. W. Wells, T. A. Mayo, J. M. Body, M. B. Scott, H. C. Adams.

FIXTURES—1897.

First XV.	*Club.*	*Ground.*
October 9th.	—Civil Service	Richmond.
,, 16th.	—Upper Clapton	Clapton.
,, 23rd.	—Kensington	Wood Lane.
,, 27th.	—R.N.C.	Greenwich.
,, 30th.	—Wickham Park	Catford.
November 3rd.	—East Sheen	Richmond.
,, 6th.	—R.I.E.C.	Cooper's Hill.
,, 13th.	—R.N.C.	Sandhurst.
,, 20th.	—Marlborough Nomads	Stamford Bridge.
,, 27th.	—Croydon	Croydon.
December 4th.	—Old Leysians	Stamford Bridge.
,, 11th.	—Old Merchant Taylors	Richmond.
,, 18th.	—Upper Clapton	Winchmore Hill.

ASSOCIATION FOOTBALL CLUB.

President.—W. H. H. Jessop, Esq., F.R.C.S.

Captains.—L. E. Whitaker, 1st XI, C. G. Watson, 2nd XI.

Vice-Captain.—J. A. Willett.

Hon. Secretaries.—A. H. Bostock and A. R. Tweedie.

Committee.—R. P. Brown, H. N. Marrett, H. J. Pickering, C. H. Turner, G W. Stone, L. Orton.

FIXTURES—1897.

	Club.	*Ground.*
Wed. Oct. 6th.	—Practice Match	Winchmore Hill.
Sat. ,, 9th.	—Cheshunt	Cheshunt.
Wed. ,, 13th.	—Ealing	Ealing.
Sat. ,, 16th.	—R.M.A.	Woolwich.
Wed. ,, 20th.	—Eastbourne	Eastbourne.
Sat. ,, 23rd.	—Reigate Priory	Reigate.
Wed. ,, 27th.	—West Herts	Watford.
Sat. ,, 30th.	—Crouch End Vampires	Wood Green.
Wed. Nov. 3rd.	—Clapham Rovers	Winchmore Hill.
Sat. ,, 6th.	—Hampstead	Away.
Wed. ,, 10th.	—Hastings and St. Leonards	Hastings.
Sat. ,, 13th.	—Beckenham	Beckenham.
Wed. ,, 17th.		
Sat. ,, 20th.	—Civil Service	Chiswick Park.
Wed. ,, 24th.	—Casuals	Winchmore Hill.
Sat. ,, 27th.	—Marlow	Marlow.
Wed. Dec. 1st.	—	
Sat. ,, 4th.	—Tunbridge Wells	Tunbridge Wells.
Wed. ,, 8th.	—Sittingbourne	Sittingbourne.
Sat. ,, 11th.	—Newbury	Newbury.
Sat. ,, 18th.	—Pemberton	Winchmore Hill.

The Rahere Lodge, No. 2546.

A MEETING of the Rahere Lodge, No. 2546, was held by dispensation at Frascati's on Tuesday, October 12th, Bro. W. J. Walsham, the W.M., being in the chair. Bros. Balfour Neill and Perram were raised to the third degree in Freemasonry; Bros. J. W. Haines, Sargant, Matthews, Miles, and Shewell were passed to the second degree; and Messrs. Henry Ellis, Auden, and Surgeon Folliot, R.N., were initiated. Bros. C. O'B. Harding, of Eastbourne, and Bro. Dr. Stubbs, of Wynberg, Cape Town, were elected joining members. Two of the ceremonies were performed by the W.M., the third by Bro. Swinford Edwards.

Bro. J. Keogh Murphy proposed in very appropriate terms a vote of condolence with Mrs. Forman on the death of her son, Bro. G. H. Forman, wrecked in the "Aden." The vote was seconded by Bro. Valérie, and was carried unanimously and in silence. It ran, "The members of the Rahere Lodge beg respectfully to convey to Mrs. Forman their deep sympathy with her in the great loss she has

recently sustained. The Lodge feels that by the death of Bro. G H. Forman it has lost one of the best and brightest of its members, and is assured that his end was, like his life, one of brave self-sacrifice and thought for others."

A vote of one guinea was made from the Lodge funds to the Home for the Dying.

The members and their guests, to the number of fifty-one, afterwards dined together, the evening being enlivened with music by Bros. West, Burns, and Grant.

Abernethian Society.

OFFICERS FOR THE SESSION.

Presidents:—W. Langdon Brown, J. Hussey.
Vice-Presidents:—T. J. Horder, A. L. Ormerod.
Treasurer:—A. Willett, F.R.C.S.
Hon. Secretaries:—Earnshaw Hewer, H. Thursfield.
Additional Committeemen:—E. Talbot, J. S. Williamson.

LIST OF PAPERS TO BE READ BEFORE THE SOCIETY.

1897.	*Author's Name.*	*Subject of Paper.*
July 8,	—Norman Moore, M.D., F.R.C.P.	The Deaths of the Kings of England.
Oct. 7,	—John Langton, F.R.C.S.	Some of those after whom the Wards are named.
„ 14,	—J. J. Grace, M.B., F.R.C.S.	Empyemata of the Sinuses of the Nose.
„ 21,	—.....	Discussions, Clinical and Pathological.*
„ 28,	—J. D. Rawlings, M.B.	Some Diseases often overlooked.
Nov. 4,	—T. P. Legg, M.B., F.R.C.S.	Appendicitis.
„ 11,	—R. de S. Stawell, M.B.	Perforating Gastric Ulcer.
„ 18,	—J. Morrison, M.D.	Albuminuria in Pregnancy.
„ 25,	—E. G. D. Drury, M.B.	Shortness of Breath.
Dec. 2,	—.....	Discussions, Clinical and Pathological.*
„ 9,	—F. C. Wallis, M.B., F.R.C.S.	
1898.		
Jan. 13,	—Lovell Drage, M.D.	The Coroner's Court.
„ 20,	—J. Milne Bramwell, M.B.	Hypnotism.
„ 27,	—W. H. Rivers, M.D.	Fatigue.
Feb. 3,	—Gladstone Clark, M.B., F.R.C.S.	Extra-uterine Gestation.
„ 10,	—.....	Discussions, Clinical and Pathological.*
„ 17,	—A. R. J. Douglas, M.B., B.S.	Lymphadenoma.
„ 24,	—W. d'E. Emery, M.B., B.Sc.	The Action of Tobacco.
Mar. 3,	—G. H. D. Robinson, M.D., M.R.C.P.	Some Points of Interest concerning Gonorrhœa in Women.
„ 10,	—J. P. Maxwell, M.R.C.S.	Pyuria.
„ 17,	—.....	Annual General Meeting.

* At these meetings short communications will be made, with illustrative cases and specimens. At all meetings members are invited to show cases of interest.

INAUGURAL ADDRESS.

On Thursday, October 7th, at 8 p.m., the Inaugural Address was delivered in the Medical Theatre by Mr. Langton; Mr. Hussey, President, in the chair. His subject, "Some of those after whom the Wards are named," could not fail to be of interest to all who have any thought of those who in time past have helped to make our Hospital the great institution that it now is.

He commenced by saying that most students looked upon the names of the wards in merely an abstract sort of way, and did not connect them with any definite individual, concerning whom in the majority of cases a great many interesting facts could be ascertained.

The names of Lazarus and Magdalene wards, he then went on to say, it was just as well had been dropped, as they were altogether inapplicable, pointing out at the same time that the transference of Faith and Hope to the medical side was, he considered, most appropriate, as these formed a considerable part of medical therapeutics. He then gave the history of most of those whom the wards are named after, commencing with Rahere. Coborn, we are sorry to say, was not touched upon. Mr. Langton terminated his address by alluding shortly to those who are still amongst us.

Dr. Meakin then proposed a vote of thanks, expressing the indebtedness of the Society for the trouble and interest that the Staff took in it. This was seconded by Mr. Drury. The meeting then adjourned to the library, where tea and coffee were provided. There were present about 230, including the matron and nursing staff.

On Thursday, October 14th, an ordinary meeting was held, Mr. Langdon Brown in the chair. Mr. Lance showed a case which was considered to be hæmorrhage into the lesser sac of the peritoneum after a severe strain.

Mr. J. J. Grace then read a paper on "Empyemata of the Sinuses of the Nose." Mr. Grace's paper thoroughly went into the question of diagnosis, and an abstract of his communication will appear in our next issue. In the discussion which followed, some thought that the methods that had been suggested were rather severe for diagnosis, but it was also pointed out how essential it was in some cases that the diagnosis should be correct, and how frequently the disease was mistaken.

Old Students' Dinner.

THE dinner of Old Students was held as usual on October 1st in the Great Hall of the Hospital. There was a very large attendance of old Bart.'s men and guests. Sir Thomas Smith, Bart., was in the chair, and was supported by Sir William MacCormac, Bart. (President of the Royal College of Surgeons), Surgeon-General Jameson (Director-General Army Medical Department), Sir Trevor Lawrence, Bart. (Treasurer of the Hospital), Dr. Alex. Hill (Vice-Chancellor of the University of Cambridge), Dr. Collins (Chairman of the County Council), Sir Richard Thorne Thorne, Dr. Church, Mr. Willett, Sir Dyce Duckworth, and most of the Staff of the Hospital and Medical School. After an excellent repast, Sir Thomas Smith gave the loyal toast of "The Queen and the rest of the members of the Royal Family." This was duly honoured. Sir William MacCormac then proposed "The Army, Navy, and the Reserve Forces," speaking of the deeds of valour which British soldiers and sailors had performed in the past, and of their great devotion to duty. He spoke also of the Medical Department of the Army, and coupled the toast with the name of Surgeon-General Jameson. The Director-General replied, and spoke of the great self-sacrifice in time of need of the members of the Army Medical Staff.

Sir Thomas Smith then proposed the toast of the evening, "The Hospital and Medical School." He first spoke of the regret of several old Bart.'s men that they were not able to be present, notably Sir James Paget and Sir Robert Craven of Hull, who was qualified so far back as 1847. He congratulated the authorities of the Hospital on its position of independence of outside financial support, which he said was due to the munificence of past benefactors, and to the good management of past and present Treasurers and Almoners. In regard to the School, the earliest record of students attending is 1662; and although probably there were students here much earlier than this, to-day we begin our 225th session. When he entered in 1850 there were about 80 new students; last year the number was 165. Forty-seven years ago there were nominally only 12 or 14 teachers, and some of these "would not teach;" now there are 65, all actively engaged. During the forty-seven years the history of the School had not always been one of prosperity—there was a period of depression. For the ten years 1851 to 1860 the average yearly entry was 85 all told; from 1861 to 1870 the average was only 74; from 1871 to 1880 the average entry had risen to 128; from 1881 to 1890 the average was 150; and for the past six years the average has been 166 all told. He expressed the hope that some day the Medical School may form part of a teaching University in London, and spoke of the necessity for extended provision for research and for an endowment of the Medical School. Sir Trevor Lawrence in his reply hoped that, although his retirement from the Staff would shortly take place, Sir Thomas would live for many years to come. In retiring he would carry with him a record for good work and kind charity. Having congratulated Sir Thomas Smith and Sir Richard Thorne on their Jubilee honours, he spoke of recent improvements in the Hospital, *e.g.* the re-flooring and re-furnishing of the East Wing, and said that St. Bartholomew's ought to

set the example of what a hospital should be. Next year, he said, it would be fifty years since he entered the School, and a hundred years since his father entered. St. Bartholomew's had no rival in the number of distinguished men amongst its former students. He contrasted the School of fifty years ago with that of to-day, and referred to the Hospital's income, which is now roughly £70,000 a year.

Mr. Butlin then proposed the health of "The Visitors," and remarked that even our visitors and guests were mostly old Bart.'s men; and spoke of Dr. Griffith, Master of the Society of Apothecaries; Dr. Job Collins, Chairman of the County Council; and Dr. Hill, Vice-Chancellor at Cambridge, to show the distinguished positions that Bart.'s men attain to. The toast was coupled with the name of Dr. Hill. The Vice-Chancellor replied in appropriate terms.

Sir Henry Oakley then proposed, in neat and well-chosen words, "The Chairman and the rest of the members of the Hospital Staff," and the Chairman and Sir Richard Thorne replied, Sir Richard speaking of the pride he felt in being a member of so distinguished a Staff as ours.

Dr. Collins next proposed the health of Mr. Bruce Clarke, the Secretary, who had organised the dinner. He referred to his own entrance as a Bart.'s man twenty-one years ago, and to the training in the sort of public duties he was now performing received in the debates of and as Chairman to the Abernethian Society. Energy and taste, he said, were required to organise a successful dinner, and these Mr. Bruce Clarke possessed. Mr. Bruce Clarke responded appropriately, and said that this was the largest Old Students' dinner on record. There were, he said, 173 present, and the largest previous number was 170, when Sir James Paget presided some years ago.

At ten o'clock the company adjourned to the Library for coffee, and ultimately separated at half-past eleven, after what was voted by every one to have been a most successful gathering.

Junior Staff Appointments.

The following appointments have been made, dating from October 1st.

House Physician to—

	Senior.	Junior.
Dr. Church	A. L. Ormerod, M.A., M.B., B.Ch.(Oxon.), M.R.C.S., L.R.C.P.	A. Heath, M.B.(Lond.), M.R.C.S., L.R.C.P.
Dr. Gee	T. J. Horder, B.Sc. (Lond.), M.R.C.S., L.R.C.P.	W. Langdon Brown, M.A., M.B., B.C. (Cantab.).
Sir D. Duckworth	J. Hussey, M.B.(Lond.), M.R.C.S., L.R.C.P.	C. F. Lillie, M.A., M.B., B.C., D.P.H.(Cantab.), M.R.C.S., L.R.C.P.
Dr. Hensley	F. H. Maturin, B.A.(Cantab.), M.R.C.S., L.R.C.P.	D. H. F. Cowin, M.R.C.S., L.R.C.P.
Dr. Brunton	E. G. D. Drury, M.B., B.S.(Lond.), M.R.C.S., L.R.C.P.	S. F. Smith, M.B.(Lond.), M.R.C.S., L.R.C.P.

House Surgeon to—

Sir T. Smith	H. W. Lance, B.A., M.B., B.C.(Cantab.).	Gilbert Smith, M.B. (Dunelm.), M.R.C.S., L.R.C.P.
Mr. Willett	J. A. O. Briggs, M.B. (Lond.), M.R.C.S., L.R.C.P.	A. B. Tucker, M.B. (Lond.), M.R.C.S., L.R.C.P.
Mr. Langton	E. Laming Evans, M.A., M.B., B.C.(Cantab.), M.R.C.S., L.R.C.P.	R. de S. Stawell, B.A., M.B., B.C.(Cantab.), M.R.C.S., L.R.C.P.
Mr. Marsh	J. J. Grace, M.B., B.S. (Dunelm), F.R.C.S.	M. W. Coleman, M.B. (Lond.), M.R.C.S., L.R.C.P.
Mr. Butlin	H. Williamson, B.A. (Cantab.), M.R.C.S., L.R.C.P.	A. R. J. Douglas, M.B., B.S.(Lond.), M.R.C.S., L.R.C.P.

Ophthalmic House Surgeon.—J. H. Thursfield, M.A., M.B., B.Ch.(Oxon.), M.R.C.S., L.R.C.P.

Intern Midwifery Assistant.—J. W. Haines, M.B., B.S. (Lond.), F.R.C.S.

Extern Midwifery Assistant.—J. L. Maxwell, M.B.(Lond.), M.R.C.S., L.R.C.P.

Resident Assistant Anæsthetists.

H. J. Paterson, M.A., M.B., B.C.(Cantab.), F.R.C.S.

F. H. Lewis, B.A., M.B., B.C.(Cantab.), M.R.C.S., L.R.C.P.

Award of Scholarships for the Year 1896–7.

The Scholarships and Prizes in the Medical School for the past year were awarded as follows:

Lawrence Scholarship and Gold Medal.—{G. A. Auden, J. Hussey} Æq.

Brackenbury Medical Scholarship.—T. J. Horder.

Brackenbury Surgical Scholarship.—L. B. Rawling.

Matthews Duncan Medal and Prize.—1. *Not awarded.* 2. E. C. Morland.

Senior Scholarship in Anatomy, Physiology, and Chemistry.—S. R. Scott; *prox. acc*, F. C. Borrow.

Open Scholarships in Science, Chemistry, and Physics.—{H. F. Parker, E. H. Scholefield.} Æq.

Biology and Physiology.—C. J. Thomas.

Junior.—R. C. Elmslie.

Preliminary Scientific Exhibition.—R. A. S. Sunderland.

Jeaffreson Exhibition.—S. G. Mostyn.

Kirkes' Scholarship and Gold Medal.—H. Thursfield; *prox. acc.*, T. J. Horder.

Bentley Prize (Medical).—C. C. I. Turnbull.

Hichens Prize.—A. G. Ede.

Wix Prize.—J. S. Williamson.

Harvey Prize.—J. S. Williamson. 2. A. E. Lister. 3. C. A. S. Ridout.

Sir George Burrows Prize.—J. L. Maxwell.

Skynner Prize.—J. L. Maxwell.

Practical Anatomy, Junior. Treasurer's Prize.—R. C. Elmslie.	*Practical Anatomy, Senior. Foster Prize.*—A. T. Compton.
2. W. R. Read.	2. J. S. Williamson.
3. H. Love.	3. A. E. Lister.
4. F. Gröne.	4. M. G. Winder.
5. H. H. Raw.	5. C. A. S. Ridout.
6. H. J. Slade.	6. A. T. Pridham.
7. F. N. White.	7. A. R. Tweedie.
8. R. T. Worthington.	8. R. H. R. Whitaker.
9. E. W. J. Ladell.	9. J. C. Newman.
10. A. E. Thomas.	10. G. M. Seagrove.

Shuter Scholarship.—{F. A. Bainbridge, B. Truman.} Æq.

Junior Scholarships.—{R. C. Elmslie. 2. F. Gröne.}

Junior Scholarships in Chemistry (1896).—{1. J. S. Williamson. 2. E. G. Smith.}

Award of Entrance Scholarships.

The Entrance Scholarships and Exhibitions which were competed for on September 27th, 28th, 29th, and 30th have been awarded as follows:

Scholarship of £75 in Biology and Physiology to W. Morley Fletcher, B.A., Trinity College, Cambridge.

Scholarship of £75 in Chemistry and Physics to C. Ernest West, B.A, Balliol College, Oxford.

Scholarship of £150 in Biology, Chemistry, and Physics, to Æq. {H. R. Kidner (Int. B. Sc., London). E. C. Williams (Prel. Sci. London).}

Preliminary Scientific Exhibition of £50 in Biology, Chemistry, and Physics, to E. G. Pringle (Prel. Sci. London).

JEAFFRESON EXHIBITION OF £20 IN CLASSICS AND MATHEMATICS, to

L. R. Tosswill, of Marlborough College.

We offer to these freshmen our best congratulations on their success, and we further congratulate them not only on their choice of a profession, but also on their good fortune in becoming "Bart.'s men." We give them, as well as all those who have recently entered our School, a most hearty welcome, and hope that the five years they will spend here will be as happy as they were to the thousands who have preceded them as *alumni* of our ancient Hospital. "Bart.'s" looks to them, and to all their fellow-students, each one to do his best to maintain and hand on untarnished the high prestige and traditions of his *alma mater*.

Mr. W. MORLEY FLETCHER comes to us with a good reputation from Cambridge, having already distinguished himself not only in Natural Science, but also in the athletic field. He has also done, we are told, some first-rate original work in Physiology at Cambridge. He is a brother of Dr. Morley Fletcher, one of our Demonstrators of Medicine, whom we all know.

Mr. C. Ernest West has taken a very high degree in Chemistry at Oxford, having gained a First in that subject in the Natural Science Schools. He has also, we understand, acted as a Demonstrator of Chemistry in the Balliol Laboratory.

Mr. H. R. KIDNER has passed the Intermediate Bachelor of Science Examination of the University of London, and is now studying for a degree in Science as well as in Medicine.

Mr. E. C. WILLIAMS is not quite a stranger, having been a student in the Preliminary Scientific Class during the past year. He passed the Preliminary Scientific in July last, taking Honours in Chemistry.

Mr. E G. PRINGLE also was in the Preliminary Scientific Class last year, and passed Biology at the Preliminary Scientific Examination in July last.

Mr. L. R. TOSSWILL is the son of an old Bart.'s man. He was a Scholar and Prizeman at Marlborough, and has passed the Matriculation Examination. We hear he is a good "footer" man, and hope he will prove a useful addition to our Rugby team.

Clinical Lectures for the Session.

Medical.—Fridays at 1 p.m., in the Medical Theatre.
October 8th.—Dr. Church.
" 15th.—Dr. Gee.
" 22nd.—Sir D. Duckworth.
" 29th.—Dr. Hensley.
November 5th.—Dr. Brunton.
" 12th.—Dr. Church.
" 13th.—Dr. Gee.
" 26th.—Sir D. Duckworth.
December 3rd.—Dr. Hensley.
" 10th.—Dr. Brunton.

Surgical.—Wednesdays at 2.45, in the Medical Theatre.
October 13th.—Sir Thomas Smith.
" 20th.—Sir Thomas Smith.
" 27th.—Mr. Willett.
November 3rd.—Mr. Willett.
" 10th.—Mr. Willett.
" 17th.—Mr. Langton.
" 24th.—Mr. Langton.
December 1st.—Mr. Langton.
" 8th.—Mr. Butlin.
" 15th.—Mr. Butlin.

Gynæcological.—Thursdays at 9 in the Medical Theatre.
Dr. Champneys.

Appointments.

BREMRIDGE, R. H., B.A. (Oxon.), B.Sc. (Lond.), M.R.C.S., L.R.C.P., has been appointed Assistant House Physician to the Metropolitan Hospital.

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HAMPTON, T., M.R.C.S., L.R.C.P., appointed Resident Medical Officer to the Royal Hospital for Diseases of the Chest, City Road.

* * *

HAYNES, G. S., M.R.C.S., L.R.C.P., appointed House Physician to the Metropolitan Hospital.

WAGGETT, ERNEST, M.B. (Cantab.), appointed Assistant Surgeon to the London Throat Hospital.

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WOODWARD, A., M.R.C.S., L.R.C.P., appointed House Surgeon to the Metropolitan Hospital.

Examinations.

L.S.A.—*Biology.*—H. M. Huggins; *Materia Medica.*—H. F. Stilwell and R. Storrs. *Physiology.*—N. C. Beaumont.

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FIRST CONJOINT.—*Biology.*—C. R. Keed.

Correspondence.

To the Editor of St. Bartholomew's Hospital Journal.

NEWSPAPERS FOR THE PATIENTS.

DEAR SIR,—I have the pleasure to suggest, for the consideration of your committee, that a box should be placed in some conspicuous and convenient position for the reception of newspapers for the use of patients.

There are a number of men who bring up morning papers with them, who would be very glad to hand them over to the patients; and, as you well know, the patients are only too glad to see the news of the day.

I shall be very glad to contribute five shillings for the purchase of such a box.—Yours truly,

LANCE ALLEN.

Harrow; September 28th, 1897.

Births.

BATEMAN.—On October 5th, at Devonshire Street, W., the wife of A. G. Bateman, M.B., C.M., of a daughter.

KENNEDY.—On the 18th inst., at Burke House, Beaconsfield, Bucks, the wife of William Willoughby Kennedy, M.A., M.B.(Lond.), M.R.C.S., L.R.C.P., D.P.H.(Camb.), of a daughter.

POWELL.—On September 22nd, at Glenarm House, Upper Clapton, N.E., the wife of Herbert E. Powell, M.R.C.S., of a son.

REICHARDT.—On October 5th, at Dorset House, Ewell, Surrey, the wife of E. Noel Reichardt, M.B., of a daughter.

Marriages.

EDWARDS—MCCALLUM.—On September 15th, at Holy Trinity Church, John Hammerton Edwards, M.A., M.D.Cantab., of Aadneven, Bedford, to Grace Alice McCallum, widow of James Braddon McCallum, M.A., C.E., of Blackburn.

OXLEY—MALCOLM.—On August 17th, at Christ Church, Streatham Hill, by the Rev. J. Nicholl, William Henry Francis Oxley, M.R.C.S., L.R.C.P., of Barking, Essex, to Lily, daughter of the late William Malcolm, Esq., of Glen Moray, Argyleshire.

PERRAM—MACLAINE.—On September 13th, at St. Mark's Church, Dundela, Belfast, Edward Arthur Perram, M.D., third son of Rev. George J. Perram, M.A., Holmwood Lodge, Highgate, London, to Violet Frances, younger daughter of George Langtry MacLaine, Wandsworth House, Strandtown, Belfast.

Death.

BROGDEN.—At Lagos, West Coast of Africa, on August 9th, Marie Victoria Brogden.

ACKNOWLEDGMENTS.—*Guy's Hospital Gazette, London Hospital Gazette, St. Thomas's Hospital Gazette, Middlesex Hospital Journal, The Nursing Record, The Student.*